

REMARKS

Entry, reconsideration, and allowance are respectfully requested.

The Examiner makes a new grounds of rejection of all the claims alleging that the amended subject matter is not supported in the original disclosure. The Examiner then ignores the amended limitations and reapplies the Scott reference as an anticipatory reference with respect to all claims.

A telephone interview was conducted with the Examiner on July 22, 2010 to discuss these issues. The undersigned pointed the Examiner to the example support for the amended claim language at Figures 4, 6, 8, 10, 12, and 14 as well at paragraphs [0016], [0046], and [0052]. The undersigned reminded the Examiner that the Figures are part of the application as originally filed and may provide support for the claims. This support clearly teaches a frequency offset with respect to the received user band. For example, the received user band 33 is shown substantially offset in frequency from the transformed IF frequency bands 40, 41, and 42 in Fig. 4.

The Examiner expressed concerned with the lack of literal written support for the term “offset” or “frequency offset.” The Examiner indicated that he would enter an amendment after final that replaced this frequency offset language with literally-supported language with similar meaning.

Although it is well established that there is no requirement for literal support, in an effort to move this application to allowance, Applicants amend the claims to remove reference to frequency offset and instead to recite converting to a non-used frequency at least one of the diversity antenna received signals. Explicit literal support can be found in [0015] of the published application: “A characteristic feature of the invention is to move/frequency translate

an RX signal received on one diversity antenna to a non used frequency and to consolidate/combine the frequency translated signal with an RX signal, that has not been frequency translated, and to forward the resulting composite signal on a single feeder to the radio base station.” Other example explicit support may be found in paragraphs [0016], [0036], and [0043]. Withdrawal of the objection and rejection based on alleged new matter is requested.

All claims 17-29 and 31-34 stand rejected under 35 U.S.C. §102(b) as allegedly being anticipated by newly-applied USP 5,742,5830 to Scott. This rejection is respectfully traversed.

Scott describes a receiver system for antenna diversity employing a single backhaul cable that couples the receiver to a plurality of antennas. The signals from the antennas are combined onto the single backhaul cable using frequency offsets, spread spectrum code division, time division, or a combination thereof. At the receiver, the signals from the antennas are decoupled, in the case of frequency offsets, by splitting the backhaul signal into a plurality of duplicate signals, frequency shifting selected ones of the duplicate signals, and correlating said frequency shifted signals. See Abstract.

To establish that a claim is anticipated, the Examiner must point out where each and every limitation in the claim is found in a single prior art reference. *Scripps Clinic & Research Found. v. Genentec, Inc.*, 927 F.2d 1565 (Fed. Cir. 1991). Every limitation contained in the claims must be present in the reference, and if even one limitation is missing from the reference, then it does not anticipate the claim. *Kloster Speedsteel AB v. Crucible, Inc.*, 793 F.2d 1565 (Fed. Cir. 1986). Scott fails to satisfy this rigorous standard.

A significant feature in Scott, as evident from Scott’s claim 1, is a “means for isolating each one of said antenna signals with a frequency offset from each of the others of said antenna signals, thereby generating a plurality of offset signals, said frequency offset being less than the

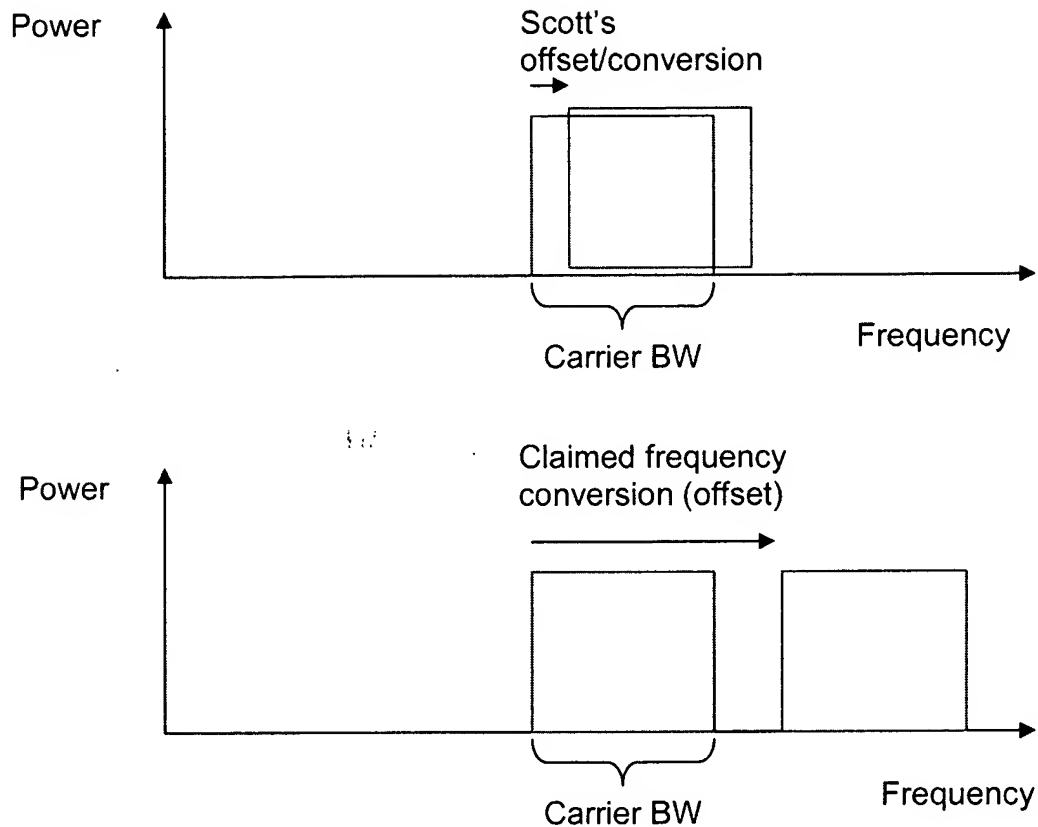
bandwidth of said transmitted signal” (emphasis added). Scott illustrates this small frequency offset in Figs. 3b and 3c. Indeed, Scott makes plain the importance of that frequency offset being as small as possible: “The frequency offset $+F_o$ is preferably kept as small as possible but large enough to maintain signal isolation with the other antenna signal 140.” Col. 4, lines 34-36.

Scott explicitly states: “The predetermined frequency offset is selected as large enough so that the signals are sufficiently isolated from one another, but smaller than the full bandwidth of the received signal.” Col. 4, lines 9-12. This makes sense in the context of Scott’s invention which seems to be primarily directed to spread spectrum code division on the feeder, (see, e.g., col. 2, lines 30-32), rather than frequency division.

In contrast, claim 17 recites:

- “converting one or more received antenna signals into a corresponding number of different frequency signals by mixing with a first set of a corresponding number of reference signals, where the one or more converted antenna signals is converted to a non-used frequency not used by the other received signals”
- “forwarding the diversity signals received on all the antennas of the receiver diversity antenna arrangement, of which one or more of the received diversity signals have been frequency converted to the non-used frequency and provided to a radio base station on a single feeder such that a number of feeders required between the radio base station and the receiver diversity antenna arrangement is reduced”
- “diversity processing two or more of the forwarded diversity signals to obtain a single enhanced received signal corresponding to the transmitted signal.”

To illustrate the difference between what Scott discloses and what is claimed, please see the following frequency spectrums:



The bottom spectrum graph shows that the frequency conversion or translation of one or more received antenna signals in claim 17 is to a non-used frequency not used by the other received signals. This is not the case in the top graph, where Scott's offset is to a frequency used by other received signals. The rejection based on Scott should be withdrawn.

In addition, the Examiner should be aware that Scott's focus is on applications where the distance between the antenna(s) and receiver is quite large, in fact much larger than the distance between antennas mounted on a base station tower, mast pole, building, etc., for example. In contrast to the independent claims 17 and 24 which are directed to these kinds of base station antenna-receiver connection applications, Scott explains at col. 1, lines 43-44 that: "it is not unusual for an antenna to be separated from the receiver by as much as five miles." A connection distance of 5 miles differs by orders of magnitude from the height of a base station

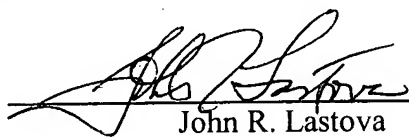
Skarby et al.
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tower, mast pole, or building. There certainly is no mention of a "site comprising a radio base station (RBS) coupled to at least one tower-mounted unit (TMA) via a single feeder and including a receiver diversity antenna arrangement according to claim 24," as recited in dependent claim 32.

The application is in condition for allowance. An early notice to that effect is requested.

Respectfully submitted,

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